

was not the lowest on record at any regular station of the Weather Bureau.

The *maximum and minimum temperatures* of the current month are given in Table I. The highest maxima were: 110, Yuma (frequently); 109, Phoenix and Redbluff (9th); 106, Walla Walla (15th); 104, Sacramento (9th); 103, Fort Smith (28th), Little Rock (31st), Bismarck (11th). The lowest maxima were: 67, Point Reyes Light (frequently); 70, Tatoosh Island (21st), Port Angeles (19th), Eureka (31st); 72, San Francisco (9th). The highest minima were: 73, Galveston (11th); 72, Port Eads and Key West (7th), Corpus Christi (frequently); 70, Charleston (9th), Savannah and Jacksonville (7th), Pensacola (8th), New Orleans (1st). The lowest minima were: 38, Williston (22); 40, Havre (24th); 41, Pysht (3d); 43, East Clallam (1st) and Bismarck (22d).

The *years of highest maximum and lowest minimum temperatures* are given in the last four columns of Table I of the current REVIEW. During the present month the maximum temperatures were the highest on record at: Bismarck and Little Rock, 103; Meridian, 102; Memphis, 101; Pensacola, 99. The minimum temperatures were the lowest on record at: Williston, 38; Jupiter, 68.

The *greatest daily range of temperature and data for computing the extreme and mean monthly ranges* are given for each of the regular Weather Bureau stations in Table I. The largest values of the greatest daily ranges were: San Luis Obispo, 45; Idaho Falls and Winnemucca, 44; Havre, 43; Carson City, 42; Miles City, 41; Fresno, 40. The smallest values were: Woods Hole and Galveston, 13; Corpus Christi and Jupiter, 14; Key West and Hatteras, 15; Port Eads and Block Island, 16; Nantucket, 17; San Diego, 18; Charleston, Pensacola, Eureka, Fort Canby, and Point Reyes Light, 19; Tampa, Mobile, San Francisco, and Tatoosh Island, 20.

Among the *extreme monthly ranges* the largest were: Denver, 66; Bismarck, 60; Havre, 58; Walla Walla, Carson City, and Fresno, 55; San Luis Obispo, Winnemucca, Williston, and Miles City, 54. The smallest values were: Corpus Christi, 18; Port Eads, 10; Point Reyes Light, 21; Key West, San Francisco, Tatoosh Island, and Woods Hole, 22.

The *accumulated monthly departures* from normal temperatures from January 1 to the end of the current month are given in the second column of the following table, and the average departures are given in the third column for comparison with the departures of current conditions of vegetation from the normal condition.

Districts.	Accumulated departures.		Districts.	Accumulated departures.	
	Total.	Average.		Total.	Average.
Middle Atlantic.....	+ 2.6	+ 0.4	New England.....	- 0.6	- 0.1
South Atlantic.....	+ 8.1	+ 1.2	Florida Peninsula.....	-11.7	- 1.7
West Gulf.....	+ 8.6	+ 1.2	East Gulf.....	- 0.9	- 0.1
Ohio Valley and Tenn.....	+ 9.0	+ 1.3			
Lower Lake.....	+ 9.5	+ 1.4			
Upper Lake.....	+20.5	+ 2.9			
North Dakota.....	+ 8.1	+ 1.2			
Upper Mississippi.....	+19.9	+ 2.8			
Missouri Valley.....	+19.3	+ 2.8			
Northern Slope.....	+ 9.8	+ 1.4			
Middle Slope.....	+21.9	+ 3.1			
Abilene (southern Slope).....	+21.4	+ 3.1			
Southern Plateau.....	+ 5.6	+ 0.8			
Middle Plateau.....	+ 3.0	+ 0.4			
Northern Plateau.....	+15.9	+ 2.3			
North Pacific.....	+ 1.4	+ 0.2			
Middle Pacific.....	+ 1.4	+ 0.2			
South Pacific.....	+ 6.0	+ 0.9			

MOISTURE.

The *quantity of moisture* in the atmosphere at any time may be expressed by the weight of the vapor coexisting with the air contained in a cubic foot of space, or by the

tension or pressure of the vapor, or by the temperature of the dew-point. The mean dew-points for each station of the Weather Bureau, as deduced from observations made at 8 a. m. and 8 p. m., daily, are given in Table I.

The *rate of evaporation* from a special surface of water on muslin at any moment determines the temperature of the wet-bulb thermometer, but a properly constructed evaporimeter may be made to give the *quantity* of water evaporated from a similar surface during any interval of time. Such an evaporimeter, therefore, would sum up or integrate the effects of those influences that determine the temperature as given by the wet bulb; from this quantity the *average humidity of the air* during any given interval of time may be deduced.

Measurements of evaporation within the thermometer shelters are difficult to make so as to be intercomparable at temperatures above and below freezing, and may be replaced by computations based on the wet-bulb temperatures. The absolute amount of evaporation from natural surfaces not protected from wind, rain, sunshine, and radiation, are being made at a few experimental stations and will be discussed in special contributions.

Sensible temperatures.—The sensation of temperature experienced by the human body and ordinarily attributed to the condition of the atmosphere depends not merely on the temperature of the air, but also on its dryness, on the velocity of the wind, and on the suddenness of atmospheric changes, all combined with the physiological condition of the observer. A complete expression for the relation between atmospheric conditions and nervous sensations has not yet been obtained.

PRECIPITATION.

[In inches and hundredths.]

The *distribution of precipitation* for the current month, as determined by reports from about 2,500 stations, is exhibited on Chart III. The numerical details are given in Tables I, II, and III. The total precipitation for the current month was heaviest over small regions in Florida, North and South Carolina, Tennessee, Virginia, eastern Pennsylvania, West Virginia, western Pennsylvania, Indiana, Illinois, Iowa, and northern Missouri, in all of which totals of 10 inches or more were reported. It was least, viz, inappreciable, over the greater part of California, Washington, and Oregon, and was less than 1 inch nearly everywhere in Nevada, Idaho, and western Montana. The larger values at regular stations were: Louisville, 13.0; Mobile and Tampa, 12.3; Parkersburg, 11.5; Kittyhawk, 10.0.

Details as to *excessive precipitation* are given in Tables XII and XIII.

The *diurnal variation*, as shown by tables of hourly means of the total precipitation, deduced from self-registering gauges kept at the regular stations of the Weather Bureau, is not now tabulated.

The *current departures* from the normal precipitation are given in Table I, which shows that precipitation was in excess in the Ohio Valley and the interior of the Atlantic States. It was deficient in the lower Mississippi and Arkansas valleys, the upper Lake Region, Washington, and Oregon. The large excesses were: Louisville, 9.2; Parkersburg, 7.1; Hannibal, 6.3; Columbus, Ohio, 6.2; Concordia, 6.1; Springfield, Ill., and Mobile, 5.8; Pensacola, 5.0. The large deficits were: Port Eads, 6.7; Meridian, 5.8; Vicksburg, 3.8; Fort Smith, 3.7; New Orleans, 3.6.

The *average departure* for each district is also given in Table I. By dividing these by the respective normals the following corresponding percentages are obtained (precipitation is in excess when the percentages of the normals exceed 100):

Above the normal: New England, 106; middle Atlantic,